

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claim 1 and ADD claims 8 and 9 in accordance with the following:

1. (CURRENTLY AMENDED) ~~An bi-directional optical wavelength division multiplexed transmission system in a bidirectional optical wavelength division multiplexed transmission system~~ for transmitting an upstream optical signal and a downstream optical signal along a same path within a same single transmission line,

    said bi-directional optical wavelength multiplexed transmission system comprising:

        a first transmitting unit setting the upstream optical signal to a first band and transmitting the upstream optical signal set to the first band;

        a second transmitting unit setting the downstream optical signal to a second band which is different from the first band and transmitting the downstream optical signal set to the second band; and

        a distributed amplifier unit having a first pumping light source for pumping only the upstream optical signal set to the first band, and a second pumping light source for pumping only the downstream optical signal set to the second band,

    wherein said first pumping light source amplifies the upstream optical signal set to the first band through backward pumping, and said second pumping light source amplifies the downstream optical signal set to the second band through backward pumping along the same path within the same transmission line.

2. (ORIGINAL) The optical wavelength division multiplexed transmission system according to claim 1, wherein said distributed amplifier unit performs distributed Raman amplification.

3. (CANCELLED)

4. (PREVIOUSLY PRESENTED) The optical wavelength division multiplexed

transmission system according to claim 1, wherein said first pumping light source and said second pumping light source respectively comprise a plurality of light sources, each of said plurality of light sources having a different wavelength.

5. (PREVIOUSLY PRESENTED) The optical wavelength division multiplexed transmission system according to claim 1, further comprising:

a wavelength-selective multiplexing/demultiplexing unit, located at one or both ends of said distributed amplifier unit, separating the upstream and downstream optical signals from each other and combining the separated upstream and downstream optical signals with each other; and

a discrete amplifier unit amplifying each of the upstream and downstream optical signals respectively set to the first and second bands.

6. (PREVIOUSLY PRESENTED) The optical wavelength division multiplexed transmission system according to claim 1, further comprising:

a multilayer thin film filter unit, located at one or both ends of said distributed amplifier unit, separating the upstream and downstream optical signals from each other and combining the separated upstream and downstream optical signals with each other; and

a discrete amplifier unit amplifying each of the upstream and downstream optical signals respectively set to the first and second bands.

7. (PREVIOUSLY PRESENTED) The optical wavelength division multiplexed transmission system according to claim 1, further comprising:

a circulator unit, located at one or both ends of said distributed amplifier unit, separating the upstream and downstream optical signals from each other and combining the separated upstream and downstream optical signals with each other; and

a discrete amplifier unit amplifying each of the upstream and downstream optical signals respectively set to the first and second bands.

8. (NEW) A bi-directional optical wavelength division multiplexed transmission system for transmitting an upstream optical signal and a downstream optical signal along a same path within a same transmission line,

the bi-directional optical wavelength multiplexed transmission system comprising:

a first transmitting unit setting the upstream optical signal to a first band and transmitting the upstream optical signal set to the first band;

a second transmitting unit setting the downstream optical signal to a second band which is different from the first band and transmitting the downstream optical signal set to the second band; and

a distributed amplifier unit having a first pumping light source for pumping the upstream optical signal set to the first band but not the downstream optical signal, and a second pumping light source for pumping the downstream optical signal set to the second band but not the upstream optical signal,

wherein said first pumping light source amplifies the upstream optical signal set to the first band through backward pumping, and said second pumping light source amplifies the downstream optical signal set to the second band through backward pumping along the same path within the same transmission line.

9. (NEW) A bi-directional optical wavelength division multiplexed transmission system for transmitting an upstream optical signal and a downstream optical signal along a same path within a same transmission line,

the bi-directional optical wavelength multiplexed transmission system comprising:

means for setting the upstream optical signal to a first band and transmitting the upstream optical signal set to the first band;

means for setting the downstream optical signal to a second band which is different from the first band and transmitting the downstream optical signal set to the second band; and

means for pumping the upstream optical signal set to the first band but not the downstream optical signal, and pumping the downstream optical signal set to the second band but not the upstream optical signal,

wherein the upstream optical signal set to the first band is amplified through backward pumping, and the downstream optical signal set to the second band is amplified through backward pumping, along the same path within the same transmission line.